

We Claims:

Sub B 17

1. A fork lift comprising retractably extendible loading prongs for lifting loads from either side of a vehicle, and a mechanism for displacing said prongs over and across said vehicle.

2. A fork lift as in claim 1, wherein said vehicle comprises a non-designated truck or trailer.

Sub A 2

3. A fork lift as in claim 1 or 2, further comprising a set of 4 extendible strut poles rigidly secured to a chassis of said vehicle, for providing additional security against turning over of said vehicle during the process of loading and unloading.

4. A fork lift as in any of the claims 1 to 3, comprising retractable deck-plates for placement of cargo during transport.

5. A fork lift as in any of the claims 1 to 4, wherein said prongs comprise either horizontally or vertically pivotal prongs, wherein said prongs can be extended toward either side of said vehicle by their pivoting 180° or 90°.

6. A fork lift as in claim 5, wherein said pivotal prongs comprise L-shaped double prongs which can be extended toward either side of said vehicle by their pivoting 90°.

Sub A 3

7. A fork lift as in any of the claims 1 to 6, wherein said prongs are split prongs.

Sub A 3
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8. A fork lift as in any of the claims 1 to 7, wherein said mechanism for displacing said prongs comprises a front and a rear transverse girders adapted to be rigidly secured to a chassis of said vehicle, a front and a rear masts, means for simultaneously reciprocating said front and rear masts at their bottoms along said front and rear

girders, correspondingly, a longitudinal beam coupled to said front and rear masts, means for reciprocating said beam in a downward-upward motion along said front and rear masts, respectively, a front and a rear uprights extending downward from said beam, said prongs comprise a front and a rear transverse prongs retractably engaged to the bottoms of said front and rear uprights, correspondingly, and means for extending said front and rear transverse prongs from said front and rear uprights, correspondingly, toward either side of said vehicle.

9. A fork lift as in claim ²~~8~~, wherein said beam comprises means for longitudinally moving said front or rear uprights along said beam.

10. A fork lift as in claim 9, wherein said means for longitudinally moving said front or rear uprights along said beam comprises hydraulic pistons.

³~~1~~. A fork lift as in claim ²~~8~~, wherein said beam comprises means for lowering or raising said front or rear uprights.

Sub A4 12. A fork lift as in any of the claims 8 to 11, wherein said means for simultaneously reciprocating said front and rear masts along said front and rear girders, comprise sprocket wheels, wherein at least one sprocket wheel is mounted on each mast and is turned against mating toothed sprocket bars which are mounted on said front and rear girders, respectively.

⁵~~13~~. A fork lift as claim ⁴~~12~~, wherein said sprocket wheels are propelled by a hydraulic drive.

Sub A5 14. A fork lift as in any of the claims 8 to 13, comprising a boom to which said front and rear masts are coupled at their tops.

Sub B3 15. A fork lift as in claim 14, wherein said means for reciprocating said longitudinal beam in a downward-upward mot comprises front and back hydraulic pistons mounted on said boom, wherein each piston is coupled to a chain which is connected to said beam, through a system of pulleys.

Sub A6 16. A fork lift as in any of the claims 8 to 15, wherein said means for extending said front and rear transverse prongs from said front and rear uprights, comprises sprocket wheels, each having a hydraulic drive, wherein each sprocket wheel is mounted on each upright and is turned against mating toothed sprocket bars which are mounted on said front and rear transverse prongs.

17. A fork lift as in any of the claims 1 to 7, wherein said mechanism for displacing said prongs comprises a front and a rear heightened transverse girders rigidly secured to a chassis of a vehicle, a longitudinal beam mounted to said front and rear girders, means for reciprocating said beam along said front and rear girders, front and rear uprights extending downward from said beam, said prongs comprise a front and a rear transverse prongs retractably engaged to the bottoms of said front and rear uprights, correspondingly, means for extending said front and rear transverse prongs from said front and rear uprights, correspondingly, toward either side of said vehicle.

18. A fork lift as in claim 17, comprising means for reciprocating said front and rear uprights in a downward-upward motion.

19. A fork lift as in claim 17, wherein said front and rear girders are combined with raising and lowering mechanisms for providing downward-upward mo of said beam.

Sub A7 20. A fork lift as in any of the claims 1 to 18, wherein said mechanism for displacing said prongs comprises a front and a rear arches adapted to be rigidly secured to a chassis of said vehicle, a longitudinal beam mounted on said front and rear arches,

means for driving said beam along said arches, said prongs comprise a front and a rear transverse prongs retractably engaged to said beam, means for extending said front and rear transverse prongs from said beam toward either side of said vehicle, and means for retaining said prongs in a horizontal configuration.

21. A fork lift substantially comprising any and all features of novelty as described, referred to, exemplified, illustrated or shown, hereinabove or in the accompanying drawings.

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